

IN THE CLAIMS

Claim 1 (Cancelled)

2. (Previously Presented) The fracture fixation system of claim 13, wherein said tip end of said second part is shaped to also maintain transverse and angular position of the second bone fragment.

3. (Previously Presented) The fracture fixation system of claim 13, comprising bone screws for securing said first part to the first bone fragment.

4. (Previously Presented) The fracture fixation system of claim 13, wherein said first and second parts form a continuous implant.

5. (Previously Presented) The fracture fixation system of claim 13, wherein said second part is connected to said first part by a screw engaged in a threaded hole.

6. (Previously Presented) The fracture fixation system of claim 13, wherein said second part is connected to said first part by a slidable connection and is secured by a screw that threads into said second part.

7. (Previously Presented) The fracture fixation system of claim 13, wherein said second part is connected to said first part by a morse taper.

8. (Previously Presented) The fracture fixation system of claim 13, wherein said first and second parts are joined by a tongue and groove connection.

9. (Original) The fracture fixation system of claim 8, wherein said tongue and groove connection is secured by a screw.

10. (Previously Presented) The fracture fixation system of claim 13, wherein said second part has a blunt end to prevent penetration and perforation through a subchondral bone of the second fragment.

11. (Previously Presented) The fracture fixation system of claim 13, wherein said tip end of the second part is symmetrical or asymmetrical for conforming to a shape of an apical corner of a subchondral bone at said endosteal surface.

Claim 12 (Cancelled)

13. (Currently Amended) A fracture fixation system for fixation of a first bone fragment and a second bone fragment of a bone fracture, said fixation system comprising a buttressing element having a first part for fixation to a surface of a first bone fragment, and a second part for insertion within an intramedullary canal of the a second bone fragment, said second part having a tip end shaped with a broad contact surface serving as a means for abutment against an endosteal surface at an end of the second bone fragment for maintaining length of the second bone fragment relative to the first bone

fragment for preventing axial collapse or shortening of the second bone fragment, and a plurality of crossing fasteners for securing said second part to said second bone fragment, two or more of said crossing fasteners being positioned along different planes.

14. (Original) The fracture fixation system of claim 13, in which a first said crossing fastener is directed dorsally, a second is directed volarly and a third is inclined toward said first part.

15. (Previously Presented) The fracture fixation system of claim 13, wherein the bone fracture is of the radius, and said tip end of said second part is contoured with an ogival or bullet shape for conforming to a pointed, apical geometry of a subchondral bone inside a tip of a radial styloid of the second bone fragment.

Claim 16 (Cancelled)

17. (Currently Amended) A fracture fixation system for fixation of a first bone fragment and a second bone fragment of a bone fracture, said fixation system comprising a buttressing element having a first part for fixation to a surface of a first bone fragment, and a second part for insertion within an intramedullary canal of the a second bone fragment, said second part having a tip end shaped with a broad contact surface serving as a means for abutment against an endosteal surface at an end of the second bone fragment for maintaining length of the second bone fragment relative to the first bone fragment for preventing axial collapse or shortening of the second bone fragment, wherein the bone fracture is of the radius, and said second part has internal crossing holes

to allow passage of crossing fasteners for securing the second part to the second bone fragment.

Claims 18, 19, 20 (Cancelled)

21. (Previously Presented by Examiner) The fracture fixation system of claim 17, wherein said crossing holes are relatively angulated with respect to one another to receive a range of insertion angles of said crossing fasteners.

22. (Original) The fracture fixation system of claim 21, comprising an external guiding arm attachable to said first part, to guide placement of the crossing fasteners in the crossing holes.

23. (Original) The fracture fixation system of claim 22, in which the crossing holes position the crossing fasteners at different angles relative to each other.

24. (Original) The fracture fixation system of claim 17, wherein said crossing fasteners have heads for compressing external bone of said distal fragment against said second part.

25. (Original) The fracture fixation system of claim 24, comprising washers beneath the heads of the fasteners.

Claims 26, 27 (Cancelled)

28. (Original) The fracture fixation system of claim 17, wherein said second part is secured in extension with said first part.

29. (Original) The fracture fixation system of claim 17, wherein said first part is torsionally rotatable with respect to said second part for selectively fixing the first part to a volar or dorsal surface of the bone.

Claims 30, 31 (Cancelled)

32. (Currently Amended) The fracture fixation system of claim ~~13~~ 12, comprising a washer engaged beneath a head of at least one of said crossing fasteners. i

Claims 33 - 36 (Cancelled)

37. (Currently Amended) The fracture fixation system ~~implant~~ of claim 32, wherein said second ~~distal~~ portion has a blunt shaped end.

38. (Currently Amended) The fracture fixation system ~~implant~~ of claim 37, wherein said blunt shaped end is of rounded bullet-like shape.

39. (Previously Presented) The intramedullary buttressing member of claim 53, wherein said tip end of rounded, bullet-like shape is adapted for congruency with the shape of an endosteal surface at a tip of a radial styloid of said bone fragment on the opposite side of the fracture.

Claim 40. (Cancelled)

41. (Previously Presented) The intramedullary buttressing member of claim 53, wherein said first portion is adapted to be situated externally along a radial side of the bone fragment on said one side of the fracture.

42. (Previously Presented) The intramedullary buttressing member of claim 53, wherein said first portion is adapted to be situated along a volar or dorsal side of the bone fragment on said one side of the fracture.

43. (Previously Presented) The intramedullary buttressing member of claim 53, wherein said second portion is torsionally rotatable with respect to said first portion for selectively fixing the first portion to a volar or dorsal surface of the bone.

44. (Previously Presented) The intramedullary buttressing member of claim 53, wherein said first and second portions are separate parts joined together.

45. (Previously Presented) The intramedullary buttressing member of claim 44, wherein said first and second portions are joined together by at least one screw.

46. (Previously Presented) The intramedullary buttressing member of claim 44, wherein said first and second portions are joined by a tongue in groove connection.

47. (Previously Presented) The intramedullary buttressing member of claim 44, wherein said first and second portions are connected by a press fit.

48. (Previously Presented) The intramedullary buttressing member of claim 53, in combination with crossing fasteners adapted for passage through the radial styloid to engage said second portion crosswise.

49. (Previously Presented) The intramedullary buttressing member of claim 53, in which one of the crossing fasteners is angled with a proximal inclination.

50. (Previously Presented) The combination of claim 48, in which one of the crossing fasteners is angled dorsally or volarly.

51. (Currently Amended) The intramedullary buttressing member of claim 53, wherein said tip end of said second portion is shaped for supporting a radial styloid of the bone from within the intramedullary canal thereof and for buttressing the radial styloid axially

of the second portion to maintain position and length of the second ~~unstable~~ bone fragment.

Claim 52 (Cancelled)

53. (Original) An intramedullary buttressing member comprising an elongated element including a first portion of flattened shape adapted for mounting on a bone fragment on one side of a bone fracture and a second portion smoothly merging with and extending from said first portion, said second portion having a rounded shape adapted for passage in an intramedullary canal in a bone fragment on an opposite side of the fracture, said second portion being formed with a tip end of rounded, bullet-like shape providing a broad buttressing surface.

54. (Original) The intramedullary buttressing member of claim 53, wherein said tip end of bullet-like shape has a configuration to enable said tip end to enter an apical space at an endosteal surface of the bone fragment on the opposite side of the bone fracture.

55. (Original) The intramedullary buttressing member of claim 54, wherein said second portion widens and increases in thickness as it extends from said first portion and provides a rounded elongated cross-section which smoothly merges with said tip end of bullet-like shape.

56. (Original) The intramedullary buttressing member of claim 55, wherein said first and second portions merge in a region at which the intramedullary buttressing member is

adapted to pass through bone cortex so that said first portion is able to be mounted superficially on said bone fragment on said one side of the fracture while said second portion is able to enter the intramedullary canal of the bone fragment on the opposite side of the fracture.

57. (Original) A method for fixation of distal and proximal fragments of a fracture of the radius, said method comprising the steps of:

providing first and second integral parts of an implant for fracture fixation of the radius;

said first and second parts being adapted for respectively engaging proximal and distal fragments of the radius;

inserting the second part of the implant into an intramedullary canal of the distal fragment and into the radial styloid of the distal bone fragment;

providing a blunt shaped end on said second part for broadly engaging and buttressing an endosteal surface of the radial styloid; and

fixing the first part of the implant to the proximal bone fragment.

58. (Original) The method of claim 57, wherein said first and second parts of the implant are formed as one piece.

59. (Original) The method of claim 57, wherein said first and second parts of the implant are threadably secured.

60. (Original) The method of claim 57, comprising pressing the distal fragment against the tip of the second part and securing crossing fasteners into the distal fragment and said second part.

61. (Original) The method of claim 57, comprising inserting crosswise fasteners through the distal bone fragment into the second part of the implant in proximity to said blunt shaped end.

62. (Original) The method of claim 57, wherein said crosswise fasteners are inserted at different angles in said bone fragment and said second part of the implant.

63. (Original) The method of claim 61, comprising applying compression force on the second bone fragment by said crosswise fasteners.

64. (Original) The method of claim 57, comprising forming a groove in said proximal bone fragment in which said first part of the implant is secured.

65. (Original) The method of claim 57, wherein said blunt shaped end of said second part is formed with an ogival or bullet shape in conformance with an apical space at the

endosteal surface of the subchondral bone inside the radial styloid, and wherein the second part applies axial pressure against said endosteal surface when the first part is secured to the proximal bone fragment.

66. (Previously Presented) Apparatus for fixation of distal and proximal fragments of a fracture of the radius, said apparatus comprising:

an implant having first and second integral parts for fracture fixation of the radius;

said first and second parts being adapted for respectively engaging proximal and distal fragments of the radius.;

said second part being sized and shaped for being inserted into an intramedullary canal of the distal fragment and into the radial styloid of the distal fragment;

said second part having a rounded end of ogival or bullet shape in conformance with an apical space at the endosteal surface of the subchondral bone inside the radial styloid to fit and conform in said space for buttressing the endosteal surface of the radial styloid; and

fixation means for fixing said first part to the proximal bone fragment.

67. (Previously Presented) The apparatus of claim 66, wherein said first and second parts of the implant are formed as one piece.

68.(Previously Presented) The apparatus of claim 66, wherein said first and second parts of the implant are threadably secured together.

69. (Previously Presented) The apparatus of claim 66, comprising crossing fasteners secured in the distal fragment and said second part to hold the tip of the second part pressed against the distal fragment.

70 (Previously Presented) The apparatus of claim 66, comprising crosswise fasteners for passing through the distal bone fragment into the second part of the implant in proximity to said blunt shaped end.

71 (Previously Presented) The apparatus of claim 70, wherein said crosswise fasteners extend at different angles in said bone fragment and said second part of the implant.

72. (Currently Amended) The apparatus of claim 70, wherein said crosswise fasteners are angled for applying compression force on the distal ~~second~~ bone fragment.

73 (Currently Amended) The apparatus of claim 70, wherein said rounded end of ~~crosswise fasteners are shaped with an~~ ogival or bullet shape is in conformance with an apical space at an endosteal surface of the subchondral bone inside the radial styloid to fit in said space, and the second part applies axial pressure against said endosteal surface when the first part is secured to the proximal bone fragment.

74 (Previously Presented) The apparatus of claim 66, wherein said first part has a lower surface shaped for being mounted externally on the proximal bone fragment such that the implant extends partly inside the intramedullary canal of the distal fragment and partly outside the bone on the proximal bone fragment.

75. (New) The fracture fixation system of claim 17, wherein said first portion includes a flat part adapted for connection on the stable bone fragment.